

## WHAT WE CLAIM IS:

## 32. A gemstone comprising:

a large surface-area, plate-shaped support having a surface with at least one pyramid-shaped depression; and

5 a thin vapor phase deposit layer comprising a thin, surface-shaped precious synthetic gemstone layer disposed on said large surface-area, plate-shaped support and having an upper surface facing away from said plate-shaped support and an underside having at least one pyramid-shaped projection disposed in and coinciding with  
10 said at least one pyramid-shaped depression of said support, wherein side faces of said at least one pyramid-shaped projection of said underside of said vapor phase deposit layer upon said plate-shaped support impart decorative, diamond-like light-reflective qualities to said synthetic gemstone layer.

15 33. A gemstone according to claim 32, wherein said plate-shaped support is a silicon wafer.

34. A gemstone according to claim 33, wherein said silicon wafer has (100) or (111) orientation.

20 35. A gemstone according to claim 32, wherein said plate-shaped support is comprised of a precious metal.

36. A gemstone according to claim 32, wherein said plate-shaped support is comprised of a metal, said metal having a hardness sufficient to support said precious stone layer upon said plate-shaped support.

37. A gemstone according to claim 32, wherein said plate-shaped support is comprised of a refractive metal.

38. A gemstone according to claim 37, wherein said metal is tungsten or molybdenum.

5 39. A gemstone according to 32, wherein said at least one pyramid-shaped depression is produced mechanically.

40. A gemstone according to claim 39, wherein said at least one pyramid-shaped depression is produced by cutting or stamping.

10 41. A gemstone according to 32, wherein said at least one pyramid-shaped depression is produced by etching.

42. A gemstone according to claim 32, wherein pyramid angles of said at least one pyramid-shaped depression comprise differing angle measurements.

15 43. A gemstone according to claim 32, wherein said at least one pyramid-shaped depression includes pyramid angles measuring approximately 109°.

44. A gemstone according to claim 32, wherein each of said precious stone layers include grain boundaries that are aligned in a column shape.

20 45. A gemstone according to claim 32, wherein said at least one pyramid-shaped depression has a mirror surface.

46. A gemstone according to claim 32, wherein an upper surface of said precious stone layer facing away from said plate-shaped support is cut.

47. A gemstone according to claim 32, wherein said precious stone layer has a color produced by doping.

48. A gemstone according to claim 32, wherein a surface of said plate-shaped support, on which said precious stone layer is supported, is curved.

49. A gemstone comprising:

a predefined section cut from a large surface-area, plate-shaped support having a surface with at least one pyramid-shaped depression, wherein said large surface-area, plate-shaped support has disposed thereon a thin vapor phase deposit layer comprising a thin, surface-shaped precious synthetic gemstone layer that has an upper surface facing away from said plate-shaped support and an underside having at least one pyramid-shaped projection arranged to correspondingly fit or coincide with said at least one pyramid-shaped depression of said support, wherein side faces of said at least one pyramid-shaped projection of said underside of said vapor phase deposit layer upon said plate-shaped support impart decorative, diamond-like light-reflective qualities to said synthetic gemstone layer.

50. A method for producing a gemstone, said method comprising the steps of:

providing a large surface-area, plate-shaped support having a surface with at least one pyramid-shaped depression;

applying a thin vapor phase deposit layer comprising a thin, surface-shaped precious synthetic gemstone layer on said large

surface-area, plate-shaped support, said precious synthetic gemstone layer having an upper surface facing away from said plate-shaped support and an underside having at least one pyramid-shaped projection arranged to correspondingly fit or coincide with said at least one pyramid-shaped depression of said support, wherein side faces of said at least one pyramid-shaped projection of said underside of said vapor phase deposit layer upon said plate-shaped support impart decorative, diamond-like light-reflective qualities to said synthetic gemstone layer; and

cutting at least one predefined, selected section from said large surface-area, plate-shaped support having said thin vapor phase deposit layer applied thereon.